



KENCRO

CHEMICALS

SODIUM HYDROXIDE SOLID

MATERIAL SAFETY DATA SHEET

SECTION 1: PRODUCT AND COMPANY INFORMATION

PRODUCT IDENTIFIER: CAUSTIC SODA MICROPEARLS
PRODUCT USE: INDUSTRIAL APPLICATIONS, ACID NEUTRALIZATION, METAL CLEANING, ETCHING AND ELECTROPLATING, SOAPS AND DETERGENTS, WATER TREATMENT
CHEMICAL FAMILY: ALKALI HYDROXIDE
SUPPLIER'S NAME AND ADDRESS: KENCRO CHEMICALS LIMITED
2172 WYECROFT RD., UNIT #4
OAKVILLE, ON
L6L 5V6
905-827-4133
24 HR. EMERGENCY NUMBER: 613-996-6666 (CANUTEC)

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENTS	C.A.S. #	WT.%	LC50	LD50	
				ORAL (RABBIT)	DERMAL (RABBIT)
SODIUM HYDROXIDE	1310-73-2	60 - 100	N/AV.	500mg/kg	1350mg/kg

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

SOLID, CRYSTALLINE AND ODOURLESS.
DANGER! DIGESTIVE TRACT, EYE AND SKIN BURNS. CAUSES RESPIRATORY TRACT IRRITATION.

SIGNS AND SYMPTOMS OF SHORT-TERM EXPOSURE:

SKIN CONTACT: CORROSIVE TO THE SKIN. CAUSES BURNS. HARMFUL IN CONTACT WITH SKIN. CAN PRODUCE INFLAMMATION AND BLISTERING.
SKIN ABSORPTION: CAN PENETRATE DEEPER LAYERS OF THE SKIN. CAN CAUSE SEVERE BURNS WITH DEEP ULCERATIONS AND PERMANENT SCARRING. SEVERITY DEPENDS ON CONCENTRATION AND DURATION OF EXPOSURE.
EYE CONTACT: DO NOT GET IN EYES. CORROSIVE TO EYES. CAUSES BURNS. DAMAGE CAN RANGE FROM MILD SCARRING TO BLISTERING, DISINTEGRATION, ULCERATION, SEVERE SCARRING AND CLOUDING. EYE CONTACT CAN RESULT IN CORNEAL DAMAGE OR BLINDNESS.
INHALATION: SEVERELY IRRITATING TO THE RESPIRATORY SYSTEM. USE ONLY WITH ADEQUATE VENTILATION.
INGESTION: DO NOT INGEST. CORROSIVE TO THE DIGESTIVE TRACT. CAUSES BURNS. WILL CAUSE SEVERE PAIN, BURNING OF THE MOUTH, THROAT AND ESOPHAGUS RESULTING IN VOMITING, DIARRHEA AND POSSIBLY COLLAPSE AND DEATH.
POTENTIAL CHRONIC HEALTH EFFECTS:
VERY HAZARDOUS IN CASE OF SKIN CONTACT (CORROSIVE, PERMEATOR) OF INHALATION (LUNG IRRITANT).
OTHER IMPORTANT HAZARDS:
PERSONS WITH PRE-EXISTING EYE OR SKIN DISORDERS MAY BE MORE SUSCEPTIBLE TO THE EFFECTS OF THIS PRODUCT.

SECTION 4: FIRST AID MEASURES

INHALATION: MOVE EXPOSED PERSON TO FRESH AIR. IF NOT BREATHING, IF BREATHING IS IRREGULAR OR IF RESPIRATORY ARREST OCCURS, PROVIDE ARTIFICIAL RESPIRATION OR OXYGEN BY TRAINED

PERSONNEL. LOOSEN TIGHT CLOTHING SUCH AS A COLLAR, TIE, BELT OR WAISTBAND. GET MEDICAL ATTENTION IMMEDIATELY.

SKIN CONTACT: IN CASE OF CONTACT, IMMEDIATELY FLUSH SKIN WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES WHILE REMOVING CONTAMINATED CLOTHING AND SHOES. WASH CLOTHING BEFORE REUSE. CLEAN SHOES THOROUGHLY BEFORE REUSE. GET MEDICAL ATTENTION IMMEDIATELY.

EYE CONTACT: CHECK FOR AND REMOVE ANY CONTACT LENSES. IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES, OCCASIONALLY LIFTING THE UPPER AND LOWER EYELIDS. GET MEDICAL ATTENTION IMMEDIATELY.

INGESTION: WASH OUT MOUTH WITH WATER. DO NOT INDUCE VOMITING UNLESS IDRECTED TO DO SO BY MEDICAL PERSONNEL. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. GET MEDICAL ATTENTION IMMEDIATELY.

NOTES TO PHYSICIAN:
NO SPECIFIC TREATMENT. TREAT SYMPTOMATICALLY. CONTACT POISON TREATMENT SPECIALIST IMMEDIATELY IF LARGE QUANTITIES HAVE BEEN INGESTED OR INHALED.

SECTION 5: FIRE FIGHTING MEASURES

FIRE HAZARDS/CONDITION OF FLAMMABILITY:

NO SPECIFIC FIRE OR EXPLOSION HAZARD.

FLASH POINT: N/AP.

FLASH POINT METHOD: N/AP.

LOWER FLAMMABLE LIMIT: N/AP.

(% BY VOL.)

AUTO IGNITION TEMPERATURE: N/AP.

UPPER FLAMMABLE LIMIT: N/AP.

(% BY VOL.)

OXIDIZING PROPERTIES:

FLAME PROJECTION LENGTH: N/AP.

EXPLOSION DATA: SENSITIVITY TO MECHANICAL IMPACT/STATIC DISCHARGE:

NOT EXPECTED TO BE SENSITIVE TO MECHANICAL IMPACT OR STATIC DISCHARGE.

SUITABLE EXTINGUISHING MEDIA:

USE AN EXTINGUISHING AGENT SUITABLE FOR SURROUNDING FIRE. PROMPTLY ISOLATE THE SCENE BY REMOVING ALL PERSONS FROM THE VICINITY OF THE INCIDENT IF THERE IS A FIRE. NO ACTION SHALL BE TAKEN INVOLVING ANY PERSONAL RISK OR WITHOUT SUITABLE TRAINING.

SPECIAL FIRE-FIGHTING PROCEDURES/EQUIPMENT:

FIRE-FIGHTERS SHOULD WEAR APPROPRIATE PROTECTIVE EQUIPMENT AND NIOSH APPROVED SELF-CONTAINED BREATHING APPARATUS (SCBA) WITH A FULL FACE-PIECE OPERATED IN POSITIVE PRESSURE MODE.

HAZARDOUS COMBUSTION PRODUCTS:

DECOMPOSITION PRODUCTS MAY INCLUDE THE FOLLOWING MATERIALS: METAL OXIDES/OXIDES. PRODUCT MAY REACT WITH CERTAIN METALS TO FORM FLAMMABLE HYDROGEN GAS.

SECTION 6: ACCIDENTAL RELEASE MEASURES

LEAK AND SPILL PROCEDURES:

NO ACTION SHALL BE TAKEN INVOLVING ANY PERSONAL RISK OR WITHOUT SUITABLE TRAINING. EVACUATE SURROUNDING AREAS. KEEP UNNECESSARY AND UNPROTECTED PERSONNEL FROM ENTERING. DO NOT TOUCH OR WALK THROUGH SPILLED MATERIAL. PROVIDE ADEQUATE VENTILATION. WEAR APPROPRIATE RESPIRATOR WHEN VENTILATION IS INADEQUATE. PUT ON APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT (SEE SECTION 8). AVOID DISPERSAL OF SPILLED MATERIAL AND RUNOFF AND CONTACT WITH SOIL, WATERWAYS, DRAINS AND SEWERS. INFORM THE RELEVANT AUTHORITIES IF THE PRODUCT HAS CAUSED ENVIRONMENTAL POLLUTION (SEWERS, WATERWAYS, SOIL OR AIR). MOVE CONTAINERS FROM SPILL AREA. VACUUM OR SWEEP UP MATERIAL AND PLACE IN A DESIGNATED, LABELLED WASTE CONTAINER. DISPOSE OF VIA A LICENSED WASTE DISPOSAL CONTRACTOR.

SECTION 7: HANDLING AND STORAGE

SAFE HANDLING PROCEDURES:

PUT ON APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT (SEE SECTION 8). EATING, DRINKING AND SMOKING SHOULD BE PROHIBITED IN AREAS WHERE THIS MATERIAL IS HANDLED, STORED AND PROCESSED. WORKERS SHOULD WASH HANDS AND FACE BEFORE EATING, DRINKING AND SMOKING. DO NOT GET IN EYES OR ON SKIN OR CLOTHING. DO NOT INGEST. USE ONLY WITH ADEQUATE VENTILATION. WEAR APPROPRIATE RESPIRATOR WHEN VENTILATION IS INADEQUATE. KEEP IN THE ORIGINAL CONTAINER OR AN APPROVED ALTERNATIVE MADE FROM A COMPATIBLE MATERIAL, KEPT TIGHTLY CLOSED WHEN NOT IN

USE. EMPTY CONTAINERS RETAIN PRODUCT RESIDUE AND CAN BE HAZARDOUS. DO NOT REUSE CONTAINER.

STORAGE REQUIREMENTS:

STORE IN ACCORDANCE WITH LOCAL REGULATIONS. STORE IN ORIGINAL CONTAINER PROTECTED FROM DIRECT SUNLIGHT IN A DRY, COOL AND WELL-VENTILATED AREA, AWAY FROM INCOMPATIBLE MATERIALS AND FOOD AND DRINK. PROTECT FROM HUMIDITY. KEEP CONTAINER TIGHTLY CLOSED AND SEALED UNTIL READY FOR USE. CONTAINERS THAT HAVE BEEN OPENED MUST BE CAREFULLY RESEALED AND KEPT UPRIGHT TO PREVENT LEAKAGE. DO NOT STORE IN UNLABELLED CONTAINERS. WHEN DILUTING, SLOWLY ADD CAUSTIC TO COLD WATER TO AVOID SPLATTERING. USE APPROPRIATE CONTAINMENT TO AVOID ENVIRONMENTAL CONTAMINATION.

INCOMPATIBLE MATERIALS:

AVOID CONTACT WITH STRONG ACIDS, WATER, ORGANHALOGEN COMPOUNDS, NITRO AND CHLORO ORGANIC COMPOUNDS. ALSO METALS SUCH AS ALUMINUM, ZINC, TIN AND COPPER. IT WILL ALSO REACT WITH BRONZE AND BRASS.

SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

EXPOSURE LIMITS			
INGREDIENTS	ACGIH TLV	OSHA PEL	
		PEL	STEL
SODIUM HYDROXIDE	2MG/M ³ (CEILING)	N/AV.	N/AV.

SEE COMPOSITION/INFORMATION ON INGREDIENTS, SECTION 2.

ENGINEERING CONTROLS:

USE ONLY WITH ADEQUATE VENTILATION. IF USER OPERATIONS GENERATE DUST, FUMES, GAS, VAPOUR OR MIST, USE PROCESS ENCLOSURES, LOCAL EXHAUST VENTILATION OR OTHER ENGINEERING CONTROLS TO KEEP WORKER EXPOSURE TO AIRBORNE CONTAMINANTS BELOW ANY RECOMMENDED OR STATUTORY LIMITS.

GLOVES/TYPE:

CHEMICAL-RESISTANT, IMPERVIOUS GLOVES COMPLYING WITH AN APPROVED STANDARD SHOULD BE WORN AT ALL TIMES WHEN HANDLING CHEMICAL PRODUCTS IF A RISK ASSESSMENT INDICATES THIS IS NECESSARY. RECOMMENDED: NEOPRENE, BUTYL RUBBER, PVC.

RESPIRATORY/TYPE:

USE A PROPERLY FITTED, AIR-PURIFYING OR AIR-FED RESPIRATOR COMPLYING WITH AN APPROVED STANDARD IF A RISK ASSESSMENT INDICATES THIS IS NECESSARY. RESPIRATOR SELECTION MUST BE BASED ON KNOWN OR ANTICIPATED EXPOSURE LEVELS, THE HAZARDS OF THE PRODUCT AND THE SAFE WORKING LIMITS OF THE SELECTED RESPIRATOR.

EYE/TYPE:

SAFETY EYEWEAR COMPLYING WITH AN APPROVED STANDARD SHOULD BE USED WHEN A RISK ASSESSMENT INDICATES THIS IS NECESSARY TO AVOID EXPOSURE TO LIQUID SPLASHES, MISTS OR DUSTS. RECOMMENDED: CHEMICAL SAFETY GOGGLES WITH SIDE SHIELDS AND FACESHIELD.

FOOTWEAR/TYPE:

WEAR NITRILE OR NEOPRENE BOOTS.

CLOTHING/TYPE:

PERSONAL PROTECTIVE EQUIPMENT FOR THE BODY SHOULD BE SELECTED BASED ON THE TASK BEING PERFORMED AND THE RISKS INVOLVED AND SHOULD BE APPROVED BY A SPECIALIST BEFORE HANDLING THIS PRODUCT. RECOMMENDED: OVERALL.

OTHER/TYPE:

WASH HANDS, FOREARMS AND FACE THOROUGHLY AFTER HANDLING CHEMICAL PRODUCTS, BEFORE EATING, SMOKING AND USING LAVATORY AND AT THE END OF THE WORKING PERIOD. APPROPRIATE TECHNIQUES SHOULD BE USED TO REMOVE POTENTIALLY CONTAMINATED CLOTHING. WASH CONTAMINATED CLOTHING BEFORE REUSE. ENSURE THAT EYEWASH STATIONS AND SAFETY SHOWERS ARE CLOSE TO THE WORKSTATION LOCATION.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE:	SOLID (CRYSTALLINE)	APPEARANCE:	WHITE. TRANSLUCENT.
ODOUR:	ODOURLESS	ODOUR THRESHOLD:	N/AP.
PH:	14 [CONC. (%W/W): 5]	BOILING POINT:	1390°C (2534°F)
SPECIFIC GRAVITY:	2.13 @ 20°C	MELTING/FREEZING POINT:	318°C (604.4°F)
COEFFICIENT OF WATER/OIL		SOLUBILITY IN WATER:	EASILY SOLUBLE IN COLD WATER
DISTRIBUTION:	N/AP.	VAPOUR DENSITY (AIR=1):	2.13 @ 15.5°C
EVAPOURATION RATE:	N/AP.	VAPOUR PRESSURE (mmHg):	0.2kPa (1.5mmHg)
MOLECULAR WEIGHT:	0.00G/MOLE		
MOLECULAR FORMULA:	NAOH		

SECTION 10: REACTIVITY AND STABILITY DATA

STABILITY AND REACTIVITY:

STABLE UNDER NORMAL CONDITIONS. PROTECT FROM HUMIDITY. CAN SLOWLY PICK UP MOISTURE FROM AIR AND REACT WITH CO₂ TO FORM SODIUM CARBONATE.

CONDITIONS TO AVOID:

NO SPECIFIC DATA. MATERIALS TO AVOID INCLUDE ORGANIC MATERIALS, METALS, ACIDS AND MOISTURE.

HAZARDOUS DECOMPOSITION PRODUCTS:

UNDER NORMAL CONDITIONS OF STORAGE AND USE, HAZARDOUS DECOMPOSITION PRODUCTS SHOULD NOT BE PRODUCED. SODIUM HYDROXIDE DOES NOT POLYMERIZE ITSELF, BUT WILL VIOLENTLY POLYMERIZE ACETALDEHYDE, ACROLEIN AND ACRYLONITRILE.

SECTION 11: TOXICOLOGICAL INFORMATION

TOXICOLOGICAL DATA: REFER TO SECTION 2 FOR INDIVIDUAL INGREDIENT LD50'S.

CARCINOGENIC STATUS: NO KNOWN SIGNIFICANT EFFECTS OR CRITICAL HAZARDS.

REPRODUCTIVE EFFECTS: NO KNOWN SIGNIFICANT EFFECTS OR CRITICAL HAZARDS.

TERATOGENICITY: NO KNOWN SIGNIFICANT EFFECTS OR CRITICAL HAZARDS.

MUTAGENICITY: NO KNOWN SIGNIFICANT EFFECTS OR CRITICAL HAZARDS.

SENSITIZATION TO MATERIAL:

REFER TO SECTION 3 FOR SIGNS AND SYMPTOMS OF SHORT-TERM EXPOSURE.

SYNERGISTIC MATERIALS: NO KNOWN INFORMATION AVAILABLE.

MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

ADVERSE CONDITIONS OF INHALATION MAY INCLUDE RESPIRATORY TRACT IRRITATION AND COUGHING. SYMPTOMS OF INGESTION INCLUDE STOMACH PAINS. SYMPTOMS OF OVER EXPOSURE TO SKIN INCLUDE PAIN, REDNESS AND BLISTERING. ADVERSE CONDITIONS TO EYES MAY INCLUDE PAIN, WATERING AND REDNESS.

SECTION 12: ECOLOGICAL INFORMATION

ENVIRONMENTAL EFFECTS:

N/AV.

IMPORTANT ENVIRONMENTAL CHARACTERISTICS:

NO INFORMATION AVAILABLE.

ECOTOXICOLOGICAL:

SODIUM HYDROXIDE

FISH 48HRS ACUTE LC50 33 – 100MG/L

CAUSTIC SODA MICROPEARLS

CRUSTACEANS – CERIOPAPHNIA 48HRS EC80 – 40MG/L

FISH (GAMBUSIA AFFINIS 96HRS LC50 – 125MG/L

SECTION 13: DISPOSAL CONSIDERATIONS

HANDLING FOR DISPOSAL: THE GENERATION OF WASTE SHOULD BE AVOIDED OR MINIMIZED WHEREVER POSSIBLE. EMPTY CONTAINERS OR LINERS MAY RETAIN SOME PRODUCT RESIDES. THIS MATERIAL AND ITS CONTAINER MUST BE DISPOSED OF IN A SAFE WAY. DO NOT PUNCTURE, DRAG OR SLIDE CONTAINERS. DO NOT SMOKE IN ANY CHEMICAL HANDLING OR STORAGE AREA. WASH HANDS BEFORE EATING. KEEP CONTAINER CLOSED WHEN NOT IN USE. SPECIAL PRECAUTIONS FOR DILUTING CAUSTIC SODA SOLUTION: 1. ALWAYS ADD CAUSTIC SODA TO WATER WITH CONSTANT AGITATION. NEVER ADD WATER TO CAUSTIC SODA SOLUTION. 2. THE WATER SHOULD BE LUKE WARM (80-100 F). NEVER START WITH HOT OR COLD WATER. 3. ALWAYS ADD THE GRANULES TO THE WATER GRADUALLY, STIRRING CONSTANTLY. THE ADDITION OF CAUSTIC SODA TO LIQUID WILL CAUSE A RISE IN TEMPERATURE IF CAUSTIC SODA BECOMES CONCENTRATED IN ONE AREA, OR IS ADDED TOO RAPIDLY, OR IS ADDED TO HOT OR COLD LIQUID, A RAPID TEMPERATURE INCREASE CAN RESULT IN DANGEROUS MISTS OR BOILING OR SPLATTERING WHICH MAY CAUSE AN IMMEDIATE VIOLENT ERUPTION.

METHOD OF DISPOSAL: DISPOSE OF SURPLUS AND NON-RECYCLABLE PRODUCTS VIA A LICENSED WASTE DISPOSAL CONTRACTOR. DISPOSE OF IN ACCORDANCE WITH FEDERAL, PROVINCIAL AND MUNICIPAL ENVIRONMENTAL CONTROL REGULATIONS.

SECTION 14: TRANSPORTATION INFORMATION

PROPER SHIPPING NAME: SODIUM HYDROXIDE, SOLID
TDG CLASSIFICATION: CLASS 8, UN1823, PACKING GROUP II

SECTION 15: REGULATORY INFORMATION

WHMIS CLASSIFICATION: CLASS E: CORROSIVE MATERIAL

SECTION 16: OTHER INFORMATION

LEGEND:	ACGIH	AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS
	CAS #	CHEMICAL ABSTRACTS SERVICE REGISTRY NUMBER
	LC	LETHAL CONCENTRATION
	LD	LETHAL DOSE
	N/AP.	NOT APPLICABLE
	N/AV.	NOT AVAILABLE
	NIOSH	NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH
	TDG	TRANSPORTATION OF DANGEROUS GOODS ACT/REGULATIONS
	TLV	THRESHOLD LIMIT VALUE
	WHMIS	WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM

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